

ABSTRACT

An experiment was carried out to inspect the suitability of different protein diets (plant and animal source protein) and their effect on growth and survival of *Labeo rohita*. The experiment was carried out for 10 weeks in summer from July to September, 2004 at temperature of $28 \pm 0.2^{\circ}\text{C}$ to $31 \pm 0^{\circ}\text{C}$. The experimental was run in four groups each group having three replicates. Each group was fed with. 22% protein diet, 40% protein , Rice Polish and Wheat Flour @ the rate of 5% of body weight. The 38 ± 0.2 fish ($1.3 \pm 0.1\text{g}$ each) were stocked in each aquaria. Each glass aquaria had 90 liters capacity and well supplied with artificial aerator to provide ambient water condition with normal pH and dissolve oxygen.

Each diet showed different effect on the growth of fish. Results were statistically analyzed by Randomized Complete Block Design and LSD. Fish fed with 22% diet had no significant effect on weight gain i.e. $9.6 \pm 0\text{g}$ and on survival i.e. 2 ± 0.3 fish. 40% protein had significant effect on growth and survival of fish i.e. 16 ± 0.4 fish and $40 \pm 0.7\text{g}$ respectively as compare to 22% protein diet and rice polish. Group-C was fed with Rice Polish it gave significantly lower growth i.e. $12 \pm 0.5\text{g}$ and lower survival i.e. 6 ± 0.3 fish as compare to 40% protein diet and wheat flour. Fish fed on wheat flour shown significantly better result then others on growth and survival of fish i.e. $69 \pm 0.05\text{g}$ and 32 ± 0.2 fish at the end of experiment.

These results have shown that among four diets Rice Polish and 22% protein are not suitable diets for fish, as these had no significant effect on growth and survival of fish, 40% protein diet is good for fish but due to lower survival it requires some extra ingredients in its composition. Recommendable diet proved through these investigations is Wheat Flour which had significantly higher growth and survival rates and it is easily storable and cheapest then other diets available in the market.